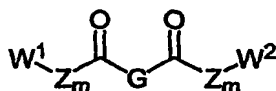


**THE CLAIMS**

What is claimed is:

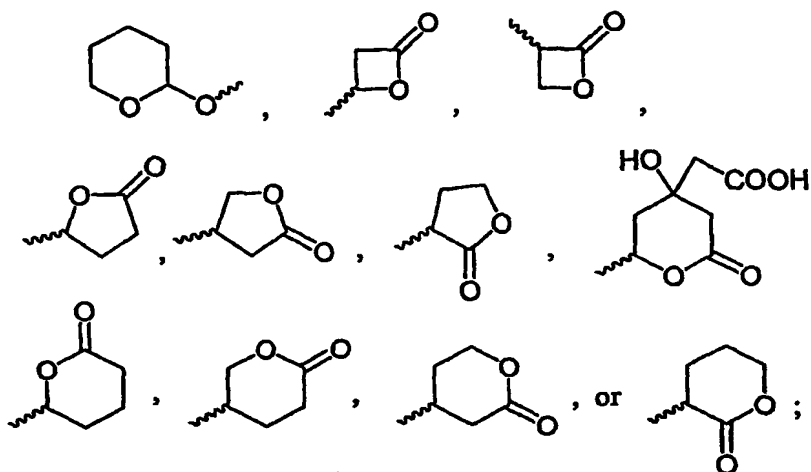
1. A compound of a formula I:



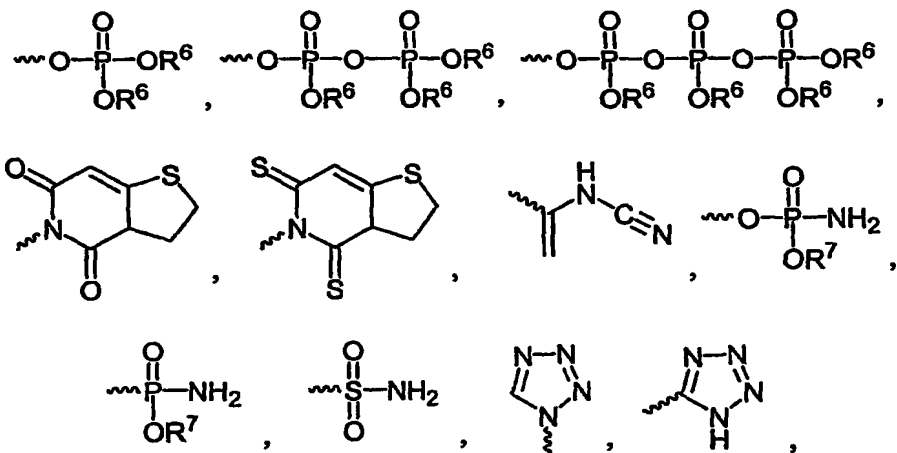
I

or a pharmaceutically acceptable salt, hydrate, solvate, or a mixture thereof, wherein

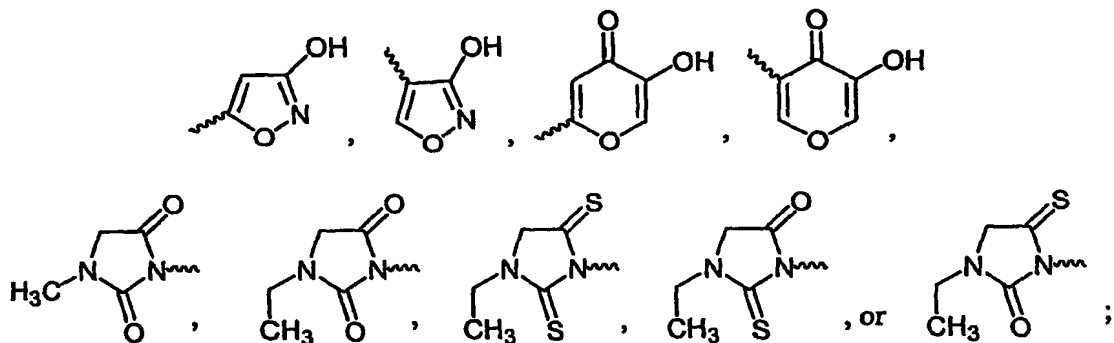
- (a) each occurrence of Z is independently CH<sub>2</sub>, CH=CH, or phenyl, wherein each occurrence of m is independently an integer ranging from 1 to 9, but when Z is phenyl then its associated m is 1;
- (b) G is (CH<sub>2</sub>)<sub>x</sub>, CH<sub>2</sub>CH=CHCH<sub>2</sub>, CH=CH, CH<sub>2</sub>-phenyl-CH<sub>2</sub>, or phenyl, wherein x is 2, 3, or 4;
- (c) W<sup>1</sup> and W<sup>2</sup> are independently L, V, C(R<sup>1</sup>)(R<sup>2</sup>)-(CH<sub>2</sub>)<sub>c</sub>-C(R<sup>3</sup>)(R<sup>4</sup>)-(CH<sub>2</sub>)<sub>n</sub>-Y, or C(R<sup>1</sup>)(R<sup>2</sup>)-(CH<sub>2</sub>)<sub>c</sub>-V, wherein c is 1 or 2 and n is an independent integer ranging from 0 to 4;
- (d) R<sup>1</sup> and R<sup>2</sup> are independently CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl or when W<sup>1</sup> or W<sup>2</sup> is C(R<sup>1</sup>)(R<sup>2</sup>)-(CH<sub>2</sub>)<sub>c</sub>-C(R<sup>3</sup>)(R<sup>4</sup>)-Y, then R<sup>1</sup> and R<sup>2</sup> can both be H, or R<sup>1</sup> and R<sup>2</sup> and the carbon to which they are both attached are taken together to form a (C<sub>3</sub>-C<sub>7</sub>)cycloalkyl group;
- (e) R<sup>3</sup> and R<sup>4</sup> are independently H, OH, CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, (C<sub>1</sub>-C<sub>6</sub>)alkoxy, phenyl, benzyl, Cl, Br, CN, NO<sub>2</sub>, or CF<sub>3</sub>, with the proviso that when R<sup>1</sup> and R<sup>2</sup> are both H, then one of R<sup>3</sup> or R<sup>4</sup> is not H or R<sup>3</sup> and R<sup>4</sup> and the carbon to which they are both attached are taken together to form a (C<sub>3</sub>-C<sub>7</sub>)cycloalkyl group;;
- (f) L is C(R<sup>1</sup>)(R<sup>2</sup>)-(CH<sub>2</sub>)<sub>n</sub>-Y;
- (g) V is



(h) Y is (C<sub>1</sub>-C<sub>6</sub>)alkyl, OH, COOH, CHO, COOR<sup>5</sup>, SO<sub>3</sub>H,



5



where

(I) R<sup>5</sup> is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl and is unsubstituted or substituted with one or more halo, OH, (C<sub>1</sub>-C<sub>6</sub>)alkoxy, or phenyl groups,

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- (ii) each occurrence of  $R^6$  is independently H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, or (C<sub>2</sub>-C<sub>6</sub>)alkynyl and is unsubstituted or substituted with one or two halo, OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, or phenyl groups; and
- (iii) each occurrence of  $R^7$  is independently H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, or (C<sub>2</sub>-C<sub>6</sub>)alkynyl; and

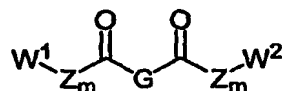
provided that:

- (i) if G is (CH<sub>2</sub>)<sub>x</sub>, x is 4, each occurrence of Z is CH<sub>2</sub>, each occurrence of m is 4, and W<sup>1</sup> is -CH(CH<sub>3</sub>)CO<sub>2</sub>H, then W<sup>2</sup> is not the same as W<sup>1</sup>;
- (ii) if G is CH<sub>2</sub>-phenyl-CH<sub>2</sub>, each occurrence of Z is CH<sub>2</sub>, each occurrence of m is 2, and W<sup>1</sup> is -C(CH<sub>3</sub>)<sub>2</sub>CH(CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, then W<sup>2</sup> is not the same as W<sup>1</sup>;
- (iii) if G is CH<sub>2</sub>-phenyl-CH<sub>2</sub>, each occurrence of Z is CH<sub>2</sub>, each occurrence of m is 2, and W<sup>1</sup> is -C(CH<sub>3</sub>)<sub>2</sub>CH<sub>2</sub>(CO<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>), then W<sup>2</sup> is not the same as W<sup>1</sup>;
- (iv) if G is CH<sub>2</sub>-phenyl-CH<sub>2</sub>, each occurrence of Z is CH<sub>2</sub>, each occurrence of m is 1, and W<sup>1</sup> is -COCH<sub>2</sub>C(CH<sub>3</sub>)<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H, then W<sup>2</sup> is not the same as W<sup>1</sup>;
- (v) if G is (CH<sub>2</sub>)<sub>x</sub>, x is 4, each occurrence of Z is CH<sub>2</sub>, each occurrence of m is 2, and W<sup>1</sup> is -C(phenyl)<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H, then W<sup>2</sup> is not the same as W<sup>1</sup>;
- (vi) if G is CH=CH, each occurrence of Z is CH<sub>2</sub>, each occurrence of m is 1, and W<sup>1</sup> is -C(CH<sub>3</sub>)<sub>2</sub>CH<sub>2</sub>(CO<sub>2</sub>H), then W<sup>2</sup> is not the same as W<sup>1</sup>; and
- (vii) if G is phenyl, each occurrence of Z is CH<sub>2</sub>, each occurrence of m is 1, and W<sup>1</sup> is -C(phenyl)<sub>2</sub>CO<sub>2</sub>H, then W<sup>2</sup> is not the same as W<sup>1</sup>.

2. The compound of claim 1, wherein:

- (a) W<sup>1</sup> and W<sup>2</sup> are independently L, V, or C(R<sup>1</sup>)(R<sup>2</sup>)-(CH<sub>2</sub>)<sub>c</sub>-V where c is 1 or 2; and
- (b) R<sup>1</sup> or R<sup>2</sup> are independently (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl.

3. The compound of claim 1, wherein  $W^1$  is L.
4. The compound of claim 1, wherein  $W^1$  is V.
5. The compound of claim 1, wherein  $W^1$  is  $C(R^1)(R^2)-(CH_2)_c-C(R^3)(R^4)-(CH_2)_n-Y$ .
6. The compound of claim 1, wherein  $W^1$  is  $C(R^1)(R^2)-(CH_2)_c-V$ .
- 5 7. The compound of claim 1, wherein  $W^1$  and  $W^2$  are independent L groups.
8. The compound of claim 7, wherein each occurrence of Y is independently  $(CH_2)_nOH$ ,  $(CH_2)_nCOOR^5$ , or  $(CH_2)_nCOOH$ .
9. A compound of the formula Ia:

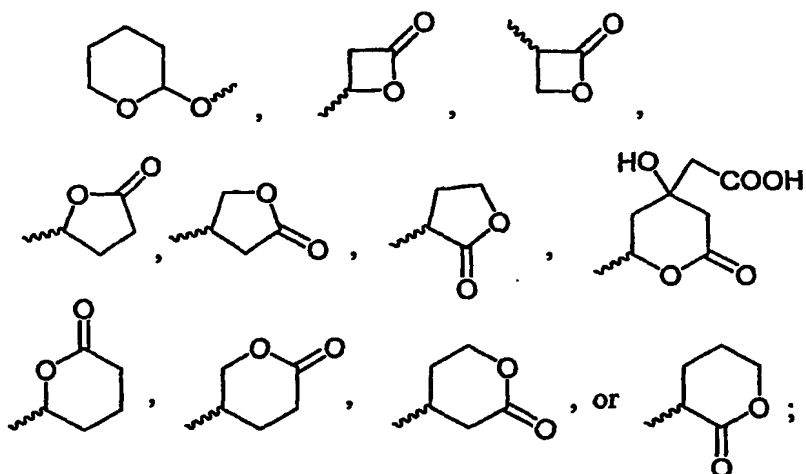


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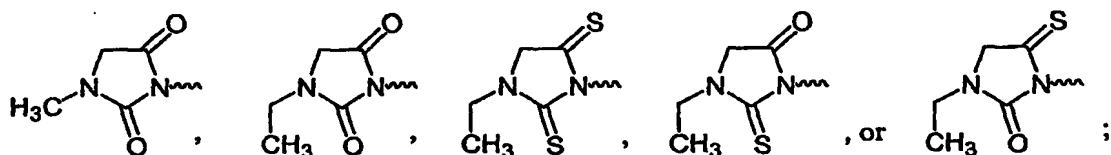
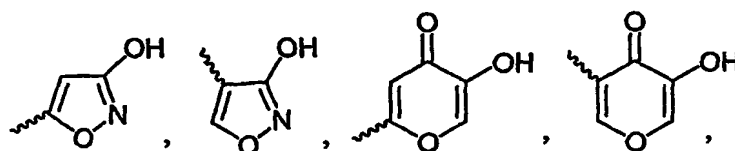
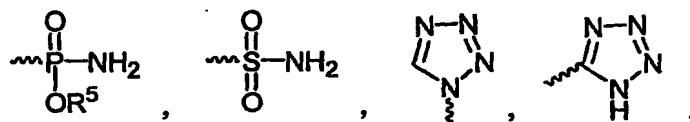
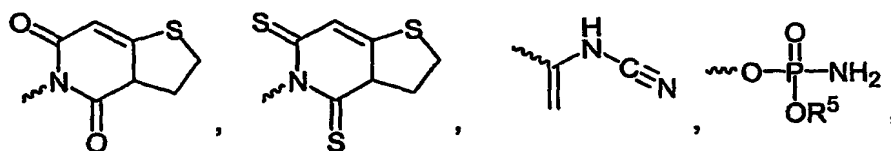
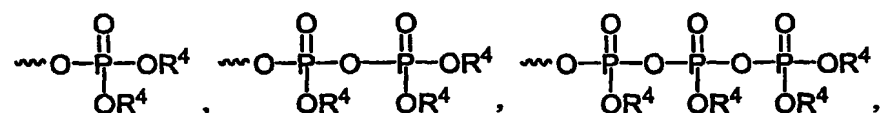
Ia

or a pharmaceutically acceptable salt, hydrate, solvate, or a mixture thereof, wherein

- (a) each occurrence of Z is independently  $CH_2$  or  $CH=CH$ , wherein each occurrence of m is independently an integer ranging from 1 to 9;
- (b) G is  $(CH_2)_x$ ,  $CH_2CH=CHCH_2$ , or  $CH=CH$ , where x is 2, 3, or 4;
- 15 (c)  $W^1$  and  $W^2$  are independently L, V, or  $C(R^1)(R^2)-(CH_2)_c-V$ , where c is 1 or 2;
- (d) each occurrence of  $R^1$  and  $R^2$  is independently  $CO_2H$ ,  $CO_2(C_1-C_6)alkyl$ ,  $(C_1-C_6)alkyl$ ,  $(C_2-C_6)alkenyl$ ,  $(C_2-C_6)alkynyl$ , phenyl, benzyl, or  $R^1$  and  $R^2$  and the carbon to which they are both attached are taken together to form a  $(C_3-C_7)cycloalkyl$  group;
- 20 (e) L is  $C(R^1)(R^2)-(CH_2)_n-Y$ , where n is an independent integer ranging from 0 to 4;
- (f) V is



- (g) each occurrence of Y is independently (C<sub>1</sub>-C<sub>6</sub>)alkyl, OH, COOH, CHO, (CH<sub>2</sub>)<sub>n</sub>COOR<sup>3</sup>, SO<sub>3</sub>H,



where

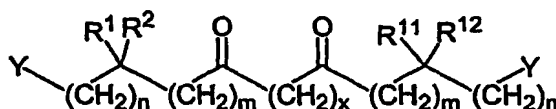
- (I) R<sup>3</sup> is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl and is unsubstituted or substituted with one or more halo, OH, (C<sub>1</sub>-C<sub>6</sub>)alkoxy, or phenyl groups,

- (ii) each occurrence of  $R^4$  is independently H,  $(C_1-C_6)$ alkyl,  $(C_2-C_6)$ alkenyl, or  $(C_2-C_6)$ alkynyl and is unsubstituted or substituted with one or two halo, OH,  $C_1-C_6$  alkoxy, or phenyl groups; and
- (iii) each occurrence of  $R^5$  is independently H,  $(C_1-C_6)$ alkyl,  $(C_2-C_6)$ alkenyl, or  $(C_2-C_6)$ alkynyl; and

provided that:

- (i) if x is 4, each occurrence of Z is  $CH_2$ , each occurrence of m is 4, and  $W^1$  is  $-CH(CH_3)CO_2H$ , then  $W^2$  is not the same as  $W^1$ ;
- (ii) if x is 4, each occurrence of Z is  $CH_2$ , each occurrence of m is 2, and  $W^1$  is  $-C(phenyl)_2CH_2CO_2H$ , then  $W^2$  is not the same as  $W^1$ .

10. The compound of claim 9, wherein  $W^1$  is L.
11. The compound of claim 9, wherein  $W^1$  is V.
12. The compound of claim 9, wherein  $W^1$  is  $C(R^1)(R^2)-(CH_2)_6-V$ .
13. The compound of claim 9, wherein  $W^1$  and  $W^2$  are independent L groups.
14. The compound of claim 13, wherein each occurrence of Y is independently OH,  $COOR^3$ , or  $COOH$ .
15. A compound of the formula Ib

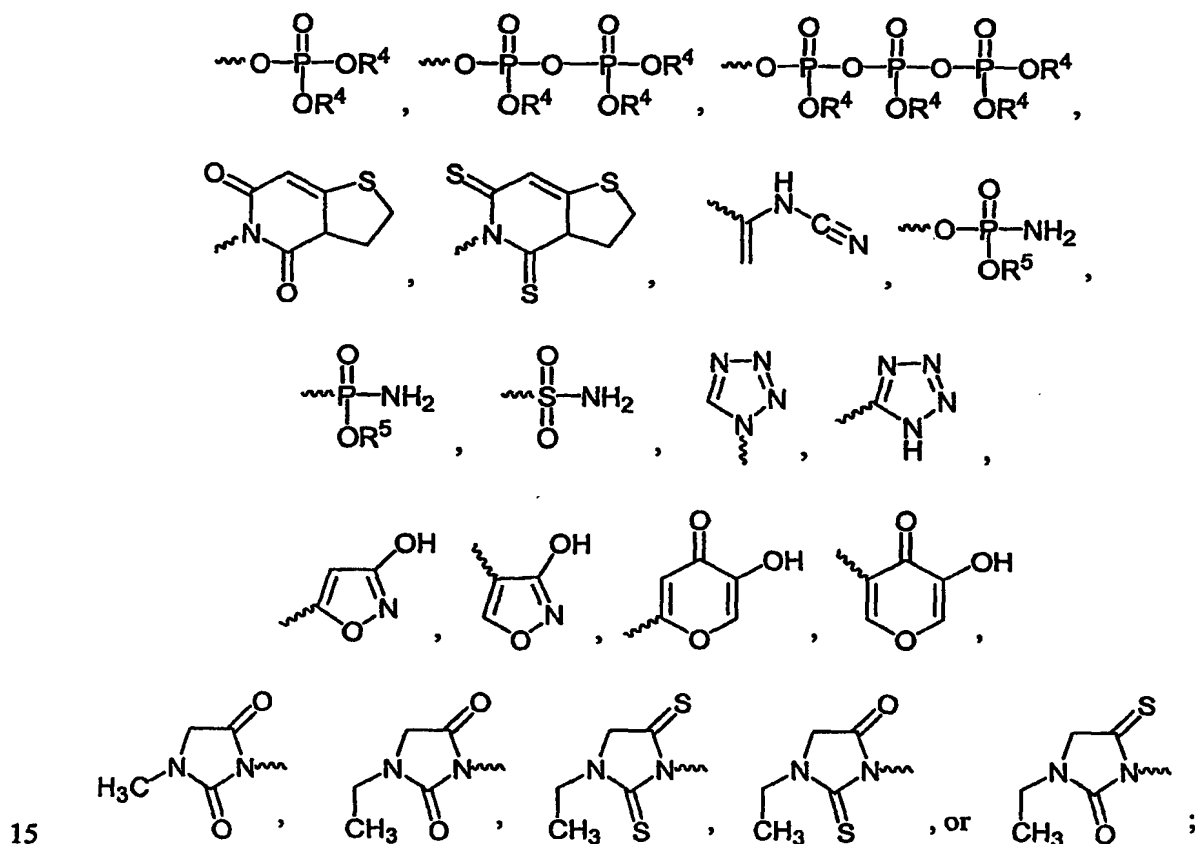


Ib

or a pharmaceutically acceptable salt, hydrate, solvate, or a mixture thereof, wherein:

- (a) each occurrence of m is independently an integer ranging from 1 to 9;
- (b) x is 2, 3, or 4;
- (c) n is an independent integer ranging from 0 to 4;

- (d) each occurrence of  $R^1$  and  $R^2$  is independently  $CO_2H$ ,  $CO_2(C_1-C_6)alkyl$ ,  $(C_1-C_6)alkyl$ ,  $(C_2-C_6)alkenyl$ ,  $(C_2-C_6)alkynyl$ , phenyl, benzyl, or  $R^1$  and  $R^2$  and the carbon to which they are both attached are taken together to form a  $(C_3-C_7)cycloalkyl$  group;
- 5 (e) each occurrence of  $R^{11}$  and  $R^{12}$  is independently H,  $CO_2H$ ,  $CO_2(C_1-C_6)alkyl$ ,  $(C_1-C_6)alkyl$ ,  $(C_2-C_6)alkenyl$ ,  $(C_2-C_6)alkynyl$ , phenyl, benzyl, or  $R^{11}$  and  $R^{12}$  and the carbon to which they are both attached are taken together to form a  $(C_3-C_7)cycloalkyl$  group;
- (f) each occurrence of Y is independently  $(C_1-C_6)alkyl$ , OH,  $COOH$ ,  $CHO$ ,  $COOR^3$ ,  
 10  $SO_3H$ ,



where

- (I)  $R^3$  is  $(C_1-C_6)alkyl$ ,  $(C_2-C_6)alkenyl$ ,  $(C_2-C_6)alkynyl$ , phenyl, or benzyl and is unsubstituted or substituted with one or more halo, OH,  $(C_1-C_6)alkoxy$ , or phenyl groups,
- 20 (ii) each occurrence of  $R^4$  is independently H,  $(C_1-C_6)alkyl$ ,  $(C_2-C_6)alkenyl$ , or  $(C_2-C_6)alkynyl$  and is unsubstituted or

substituted with one or two halo, OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, or phenyl groups; and

- (iii) each occurrence of R<sup>5</sup> is independently H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, or (C<sub>2</sub>-C<sub>6</sub>)alkynyl;

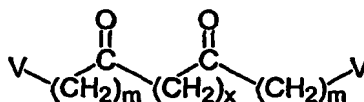
5 provided that:

- (i) if x is 4 each occurrence of m is 4, and W<sup>1</sup> is -CH(CH<sub>3</sub>)CO<sub>2</sub>H, then W<sup>2</sup> is not the same as W<sup>1</sup>;
- (ii) if x is 4 occurrence of m is 2, and W<sup>1</sup> is -C(phenyl)<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H, then W<sup>2</sup> is not the same as W<sup>1</sup>.

10 16. The compound of claim 15, wherein each occurrence of Y is independently OH, COOR<sup>3</sup>, or COOH.

17. The compound of claim 16, wherein each R<sup>1</sup> or R<sup>2</sup> is the same or different (C<sub>1</sub>-C<sub>6</sub>)alkyl group.

18. A compound of the formula Ic

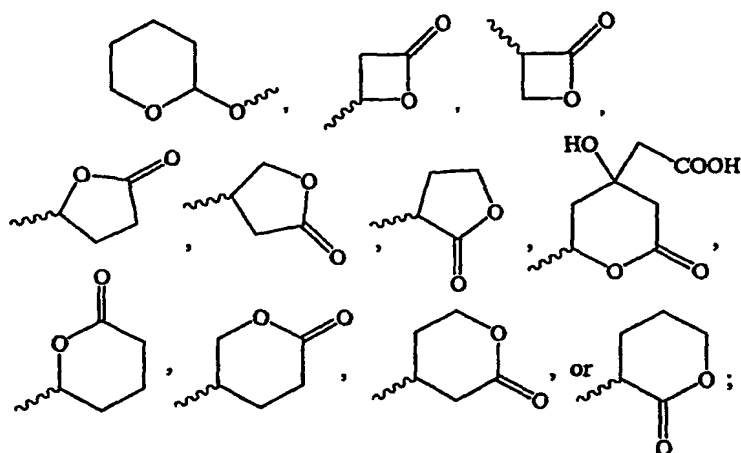


Ic

or a pharmaceutically acceptable salt, hydrate, solvate, or a mixture thereof, wherein:

- (a) each occurrence of m is an independent integer ranging from 1 to 9;
- (b) x is 2, 3, or 4;
- 20 (c) V is



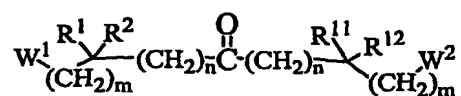


provided that:

- (i) if  $x$  is 4 each occurrence of  $m$  is 4, and  $W^1$  is  $-\text{CH}(\text{CH}_3)\text{CO}_2\text{H}$ , then  $W^2$  is not the same as  $W^1$ ; and
- (ii) if  $x$  is 4 each occurrence of  $m$  is 2, and  $W^1$  is  $-\text{C}(\text{phenyl})_2\text{CH}_2\text{CO}_2\text{H}$ , then  $W^2$  is not the same as  $W^1$ .

19. A compound according to claim 1, having the formula  
 5-[2-(5-hydroxy-4,4-dimethyl-pentyloxy)-ethoxy]-2,2-dimethyl-pentan-1-ol or  
 4-[3-(3,3-Dimethyl-4-oxo-butoxy)-propoxy]-2,2-dimethyl-butyric acid.

10 20. A compound of the formula II:

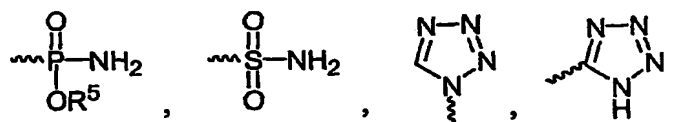
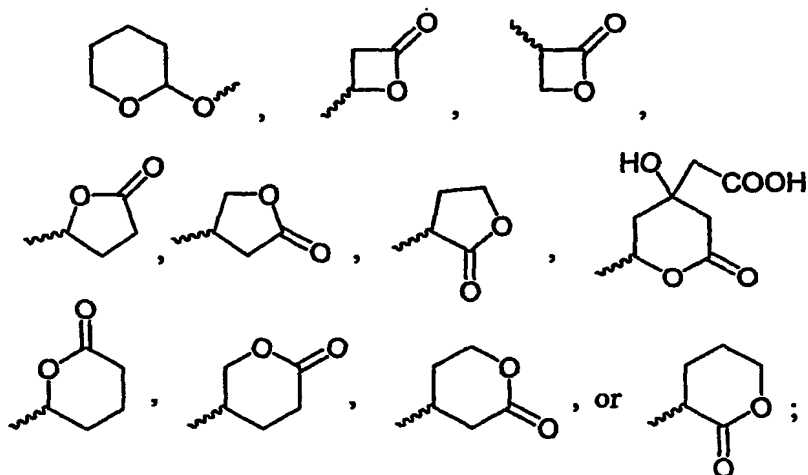
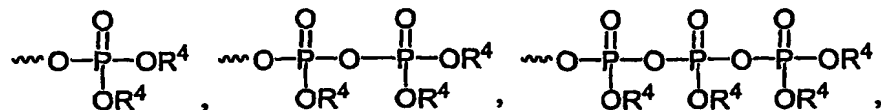


II

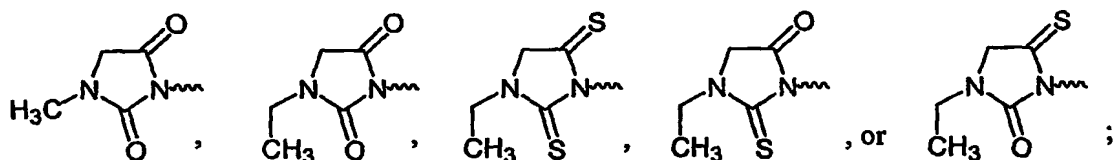
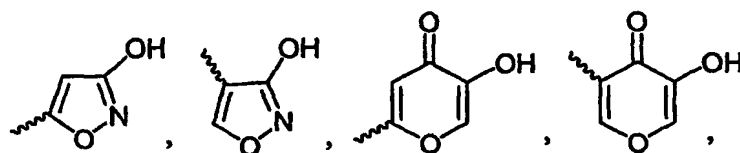
or a pharmaceutically acceptable salt, hydrate, solvate, or a mixture thereof, wherein

- (a)  $\text{R}^1$  and  $\text{R}^2$  are independently  $\text{CO}_2\text{H}$ ,  $\text{CO}_2(\text{C}_1\text{-C}_6)\text{alkyl}$ ,  $(\text{C}_1\text{-C}_6)\text{alkyl}$ ,  $(\text{C}_2\text{-C}_6)\text{alkenyl}$ ,  $(\text{C}_2\text{-C}_6)\text{alkynyl}$ , phenyl, or benzyl; or  $\text{R}^1$ ,  $\text{R}^2$ , and the carbon to which they are both attached are taken together to form a  $(\text{C}_3\text{-C}_7)\text{cycloalkyl}$  group;
- (b)  $\text{R}^{11}$  and  $\text{R}^{12}$  are independently  $\text{CO}_2\text{H}$ ,  $\text{CO}_2(\text{C}_1\text{-C}_6)\text{alkyl}$ ,  $(\text{C}_1\text{-C}_6)\text{alkyl}$ ,  $(\text{C}_2\text{-C}_6)\text{alkenyl}$ ,  $(\text{C}_2\text{-C}_6)\text{alkynyl}$ , phenyl, or benzyl; or  $\text{R}^{11}$ ,  $\text{R}^{12}$ , and the carbon to which they are both attached are taken together to form a  $(\text{C}_3\text{-C}_7)\text{cycloalkyl}$  group;
- (c)  $n$  is an integer ranging from 1 to 6;
- (d) each occurrence of  $m$  is independently an integer ranging from 0 to 4;

- (e)  $W^1$  and  $W^2$  are independently  $(C_1-C_6)$ alkyl,  $CH_2OH$ ,  $C(O)OH$ ,  $CHO$ ,  $OC(O)R^3$ ,  $C(O)OR^3$ ,  $SO_3H$ ,



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where

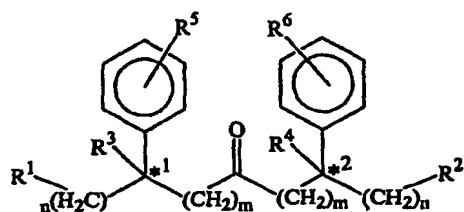
- (I) R<sup>3</sup> is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl and is unsubstituted or substituted with one or more halo, OH, (C<sub>1</sub>-C<sub>6</sub>)alkoxy, or phenyl groups,
- (ii) each occurrence of R<sup>4</sup> is independently H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, or (C<sub>2</sub>-C<sub>6</sub>)alkynyl and is unsubstituted or

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substituted with one or two halo, OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, or phenyl groups;

- (iii) each occurrence of R<sup>5</sup> is independently H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, or (C<sub>2</sub>-C<sub>6</sub>)alkynyl.

5 21. A compound of formula IIa:

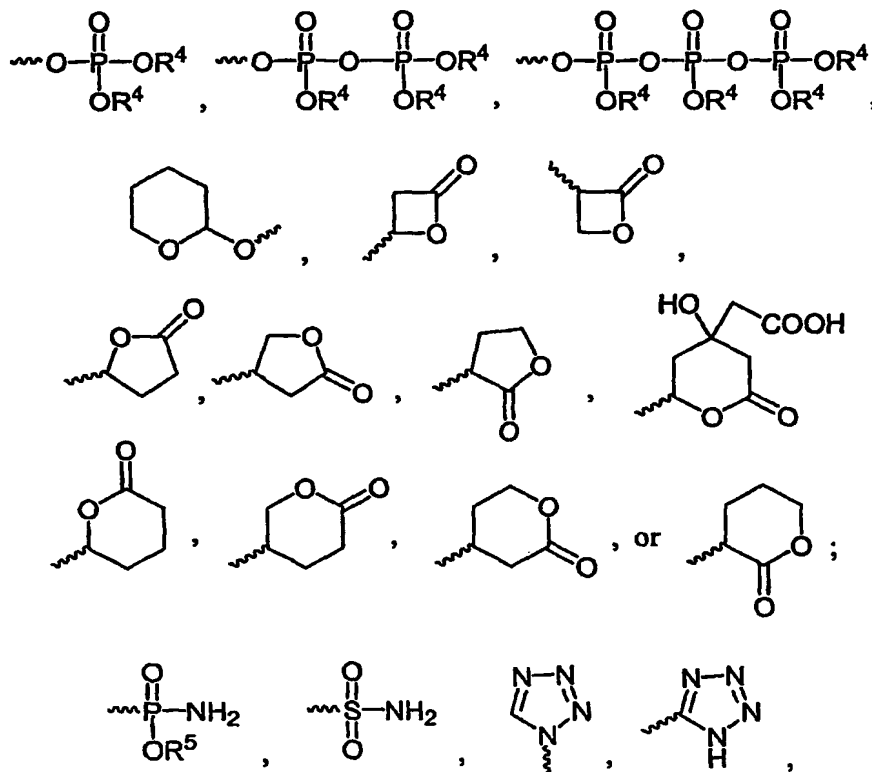


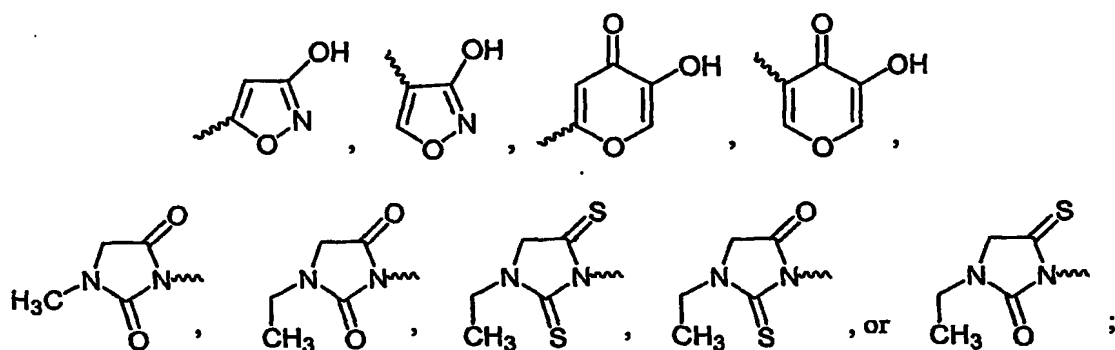
IIa

or a pharmaceutically acceptable salt, hydrate, solvate, or a mixture thereof, wherein

- (a) R<sup>1</sup> and R<sup>2</sup> are OH, COOH, CHO, COOR<sup>7</sup>, SO<sub>3</sub>H,

10





where

- (I) R<sup>7</sup> is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl and is unsubstituted or substituted with one or more halo, OH, (C<sub>1</sub>-C<sub>6</sub>)alkoxy, or phenyl groups,
- (ii) each occurrence of R<sup>8</sup> is independently H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, or (C<sub>2</sub>-C<sub>6</sub>)alkynyl and is unsubstituted or substituted with one or two halo, OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, or phenyl groups,
- (iii) each occurrence of R<sup>9</sup> is independently H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, or (C<sub>2</sub>-C<sub>6</sub>)alkynyl;
- (b) R<sup>3</sup> and R<sup>4</sup> are CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl;
- (c) R<sup>5</sup> and R<sup>6</sup> are hydrogen, halogen, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy, (C<sub>6</sub>)aryloxy, CN, or NO<sub>2</sub>, N(R<sup>5</sup>)<sub>2</sub> where R<sup>5</sup> is H, (C<sub>1</sub>-C<sub>4</sub>) alkyl, phenyl, or benzyl;
- (d) each occurrence of m is independently an integer ranging from 1 to 5;
- (e) each occurrence of n is independently an integer ranging from 0 to 4; and
- (f) \*<sup>1</sup> and \*<sup>2</sup> represent independent chiral-carbon centers, wherein each center may independently be R or S.

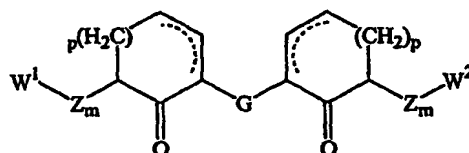
22. A compound as in claim 21 wherein \*<sup>1</sup> is a chiral-carbon center of the stereochemical configuration R or substantially R.

23. A compound as in claim 21 wherein \*<sup>1</sup> is a chiral-center of the stereochemical configuration S or substantially S.

24. A compound as in claim 21 wherein \*<sup>2</sup> is a chiral-carbon center of the stereochemical configuration R or substantially R.

25. A compound as in claim 21 wherein \*<sup>2</sup> is a chiral-center of the stereochemical configuration S or substantially S.

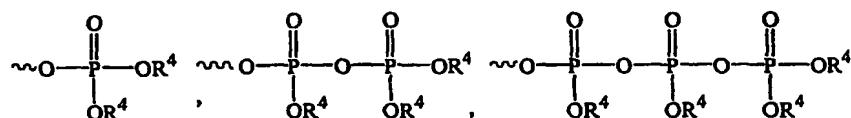
5 26. A compound of the formula III:

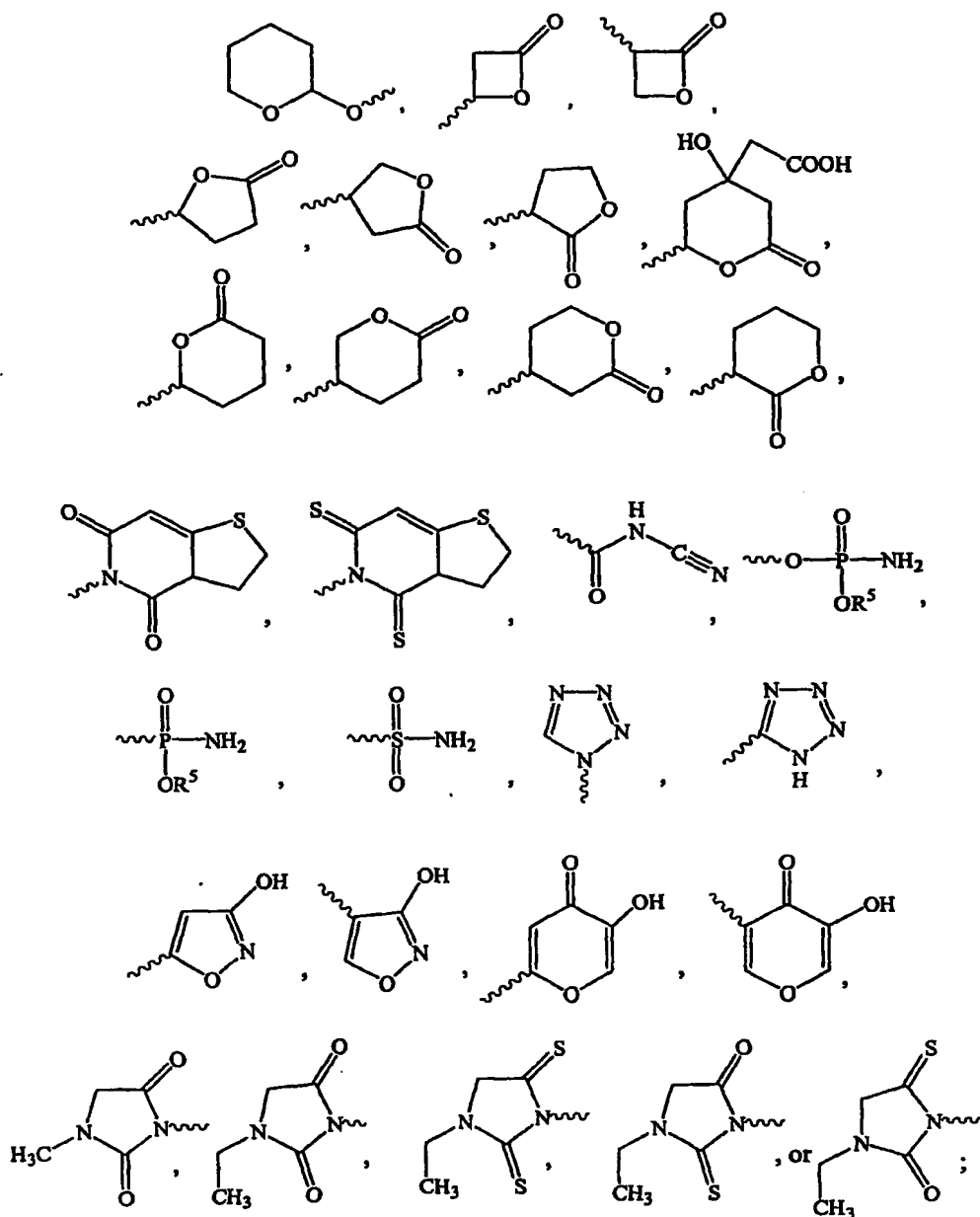


III

or a pharmaceutically acceptable salt, hydrate, solvate, or a mixture thereof, wherein

- (a) each occurrence of Z is independently CH<sub>2</sub>, CH=CH, or phenyl, where each  
 10 occurrence of m is independently an integer ranging from 1 to 5, but when Z is phenyl then its associated m is 1;
- (b) G is (CH<sub>2</sub>)<sub>x</sub>, CH<sub>2</sub>CH=CHCH<sub>2</sub>, CH=CH, CH<sub>2</sub>-phenyl-CH<sub>2</sub>, or phenyl, where x is an integer ranging from 1 to 4;
- (c) W<sup>1</sup> and W<sup>2</sup> are independently C(R<sup>1</sup>)(R<sup>2</sup>)-(CH<sub>2</sub>)<sub>n</sub>-Y where n is an integer ranging  
 15 from 0 to 4;
- (d) R<sup>1</sup> and R<sup>2</sup> are independently CO<sub>2</sub>H, CO<sub>2</sub>(C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl or R<sup>1</sup> and R<sup>2</sup> are both H, or R<sup>1</sup>, R<sup>1</sup>, and the carbon to which they are both attached are taken together to form a (C<sub>3</sub>-C<sub>7</sub>)cycloalkyl group;
- 20 (e) Y is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (CH<sub>2</sub>)<sub>n</sub>OH, (CH<sub>2</sub>)<sub>n</sub>COOH, (CH<sub>2</sub>)<sub>n</sub>CHO, (CH<sub>2</sub>)<sub>n</sub>COOR<sup>3</sup>, SO<sub>3</sub>H,





where

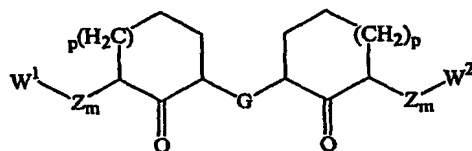
5

(I) R<sup>3</sup> is (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, (C<sub>2</sub>-C<sub>6</sub>)alkynyl, phenyl, or benzyl and is unsubstituted or substituted with one or more halo, OH, (C<sub>1</sub>-C<sub>6</sub>)alkoxy, or phenyl groups,

(ii) each occurrence of R<sup>4</sup> is independently H, (C<sub>1</sub>-C<sub>6</sub>)alkyl, (C<sub>2</sub>-C<sub>6</sub>)alkenyl, or (C<sub>2</sub>-C<sub>6</sub>)alkynyl and is unsubstituted or substituted with one or two halo, OH, C<sub>1</sub>-C<sub>6</sub> alkoxy, or phenyl groups,

10

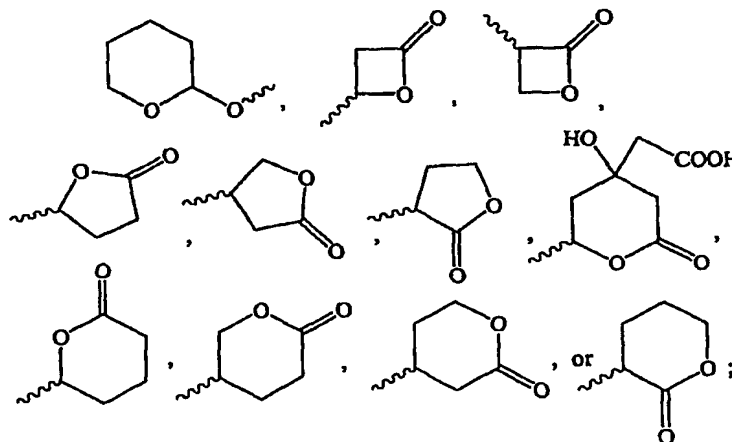
- (iii) each occurrence of  $R^5$  is independently H,  $(C_1-C_6)$ alkyl,  $(C_2-C_6)$ alkenyl, or  $(C_2-C_6)$ alkynyl; and
- (f) each occurrence of p is independently 2 or 3 where the broken line represents an optional presence of one or more additional carbon-carbon bonds that when present complete one or more carbon-carbon double bonds.
27. The compound of claim 26, wherein  $W^1$  and  $W^2$  are independent  $C(R^1)(R^2)-(CH_2)_n$ -Y groups, where n is an independent integer ranging from 0 to 4, and each occurrence of Y is independently OH,  $COOR^4$ , or COOH.
28. The compound of claim 26, wherein p is 0.
29. The compound of claim 26, wherein p is 1.
30. A compound of the formula IIIa:



### IIIa

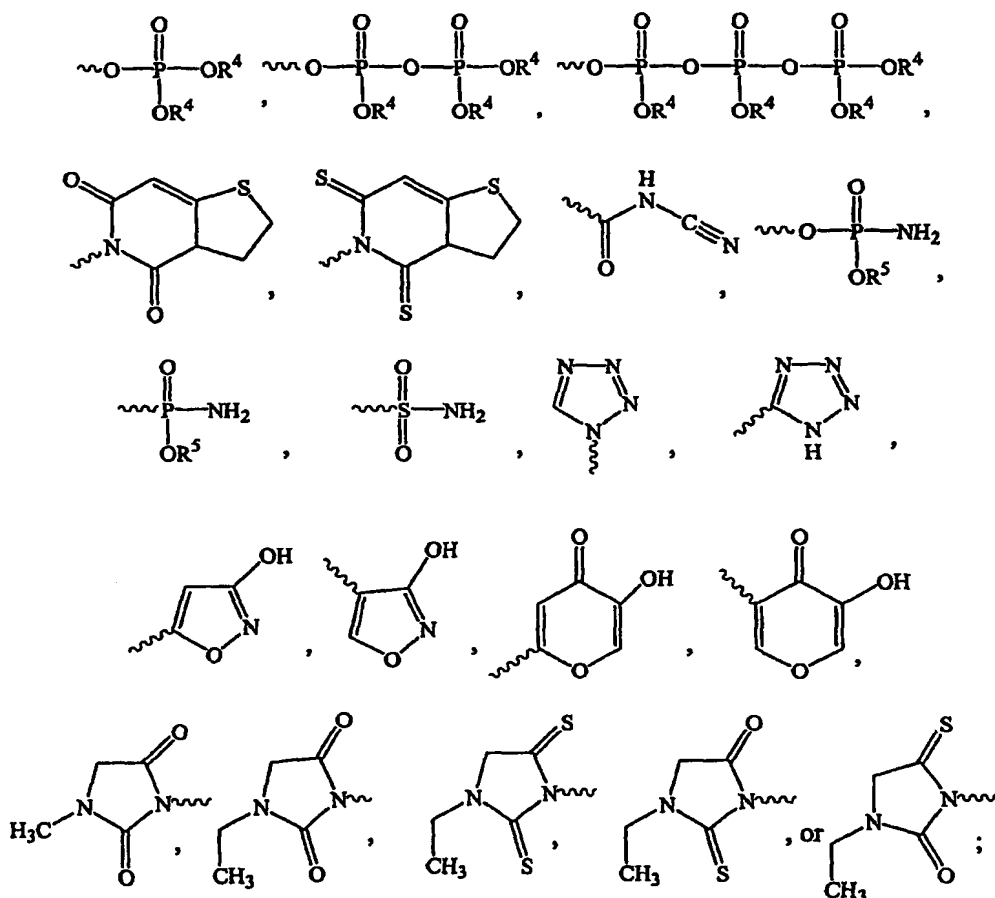
or a pharmaceutically acceptable salt, hydrate, solvate, clathrate thereof, wherein

- 15 (a) each occurrence of m is independently an integer ranging from 1 to 5;  
 (b) x is an integer ranging from 1 to 4;  
 (c)  $W^1$  and  $W^2$  are independently  $C(R^1)(R^2)-(CH_2)_n-Y$ ;



- (d) each occurrence of  $R^1$  or  $R^2$  is independently  $(C_1-C_6)$ alkyl,  $(C_2-C_6)$ alkenyl,  $(C_2-C_6)$ alkynyl, phenyl, benzyl, or  $R^1$ ,  $R^1$ , and the carbon to which they are both attached are taken together to form a  $(C_3-C_7)$ cycloalkyl group;
- (e) Y is  $(C_1-C_6)$ alkyl, OH, COOH, CHO,  $COOR^3$ ,  $SO_3H$ ,

5



where

10

- (I)  $R^3$  is  $(C_1-C_6)$ alkyl,  $(C_2-C_6)$ alkenyl,  $(C_2-C_6)$ alkynyl, phenyl, or benzyl and is unsubstituted or substituted with one or more halo, OH,  $(C_1-C_6)$ alkoxy, or phenyl groups,
- (ii) each occurrence of  $R^4$  is independently H,  $(C_1-C_6)$ alkyl,  $(C_2-C_6)$ alkenyl, or  $(C_2-C_6)$ alkynyl and is unsubstituted or substituted with one or two halo, OH,  $C_1-C_6$  alkoxy, or phenyl groups,
- (iii) each occurrence of  $R^5$  is independently H,  $(C_1-C_6)$ alkyl,  $(C_2-C_6)$ alkenyl, or  $(C_2-C_6)$ alkynyl; and

15



(f) each occurrence of p is independently 0 or 1.

31. The compound of claim 30, wherein  $W^1$  and  $W^2$  are independent  $C(R^1)(R^2)-(CH_2)_n$ -Y groups, where n is an integer from 0 to 4, and each occurrence of Y is independently OH, COOR<sup>3</sup>, or COOH.

5 32. The compound of claim 30, wherein p is 0.

33. The compound of claim 30, wherein p is 1.

34. A pharmaceutical composition comprising a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30 and a pharmaceutically acceptable vehicle, excipient, or diluent.

35. A pharmaceutical composition comprising the following compound:  
10 6-(5,5-Dimethyl-6-hydroxy-hexane-1-sulfinyl)-2,2-dimethyl-hexan-1-ol or pharmaceutically acceptable salts, hydrates, solvates, clathrates, enantiomers, diastereomers, racemates, or mixtures of stereoisomers thereof and a pharmaceutically acceptable vehicle, excipient, or diluent.

36. A method for treating or preventing a cardiovascular disease in a patient, comprising  
15 administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.

37. A method for treating or preventing a dyslipidemia in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.

20 38. A method for treating or preventing a dyslipoproteinemia in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.

39. A method for treating or preventing a disorder of glucose metabolism in a patient, comprising administering to a patient in need of such treatment or prevention a  
25 therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.

40. A method for treating or preventing Alzheimer's Disease in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
41. A method for treating or preventing Syndrome X or Metabolic Syndrome in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
42. A method for treating or preventing septicemia in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
43. A method for treating or preventing a thrombotic disorder in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
44. A method for treating or preventing a peroxisome proliferator activated receptor associated disorder in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
45. A method for treating or preventing obesity in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
46. A method for treating or preventing pancreatitis in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
47. A method for treating or preventing hypertension in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.

48. A method for treating or preventing renal disease in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
49. A method for treating or preventing cancer in a patient, comprising administering to  
5 a patient in claim 1, 9, 15, 18, 20, 21, 26, or 30.
50. A method for treating or preventing inflammation in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
51. A method for treating or preventing impotence in a patient, comprising  
10 administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
52. A method for treating or preventing a neurodegenerative disease or disorder in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically or prophylactically effective amount of a compound of claim 1, 9, 15, 18,  
15 20, 21, 26, or 30.
53. A method of inhibiting hepatic fatty acid synthesis in a patient, comprising administering to a patient in need thereof a therapeutically or prophylactically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.  
20
54. A method of inhibiting sterol synthesis in a patient, comprising administering to a patient in need thereof a therapeutically or prophylactically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.
- 25 55. A method of treating or preventing metabolic syndrome disorders in a patient, comprising administering to a patient in need of such treatment or prevention a therapeutically or prophylactically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.

56. A method of treating or preventing a disease or disorder that is capable of being treated or prevented by increasing HDL levels, which comprises administering to a patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.

5

57. A method of treating or preventing a disease or disorder that is capable of being treated or prevented by lowering LDL levels, which comprises administering to such patient in need of such treatment or prevention a therapeutically effective amount of a compound of claim 1, 9, 15, 18, 20, 21, 26, or 30.

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